

**MINIATURE FIBEROPTIC FILTER AND METHOD OF MANUFACTURE
THEREFOR**

ABSTRACT OF THE DISCLOSURE

A miniature fiberoptic filter and its manufacturing method is disclosed. The filter

5 has a first optical fiber with a step index multimode optical fiber segment attached to the first optical fiber and a graded index multimode optical fiber segment attached to the step index multimode optical fiber segment. The lengths of the step index and graded index multimode optical fiber segments define a collimation and focusing function for light from and to the first optical fiber and dielectric coatings cover the free end surface of the graded index multimode

10 optical fiber segment to define a wavelength-dependent optical filter. The miniature fiberoptic filter also has a second optical fiber with a step index multimode optical fiber segment attached to the second optical fiber, and a graded index multimode optical fiber segment attached to the step index multimode optical fiber segment. The lengths of the step index and graded index multimode optical fiber segments attached to the second optical fiber also define a collimation and focusing function for light from and to the second optical fiber. The elements are arranged and oriented so that light from the core of the first optical fiber passing through the plurality of dielectric coatings enters the core of the second optical fiber.